



Delta Stewardship Council

A CALIFORNIA STATE AGENCY

July 15, 2021

Patrick Pulupa
Executive Officer
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670
Patrick.Pulupa@waterboards.ca.gov

Re: Independent Review Panel's Report of the Delta Mercury Control Program Phase 1
Characterization and Control Study Reports – Tidal Wetlands and Open Water Habitat

Dear Mr. Pulupa:

The Delta Science Program is pleased to present the enclosed independent scientific peer review report titled, "Delta Mercury Control Program Phase 1 Tidal Wetlands and Open Water Methylmercury Control and Characterization/Control Reports – Independent Scientific Review." The transmittal of this report fulfills the request from the Central Valley Regional Water Quality Control Board to provide a review addressing the scientific quality of control studies conducted as part of the Delta Mercury Control Program. Two sets of studies were reviewed. Part 1 of the review, completed in 2019, assessed urban stormwater and wastewater mercury control studies. Enclosed is Part 2, a review of a study on mercury dynamics in tidal wetlands and the use of a model for open water mercury dynamics in the Delta and Yolo Bypass.

The Review Panel recognizes the significant progress that has been made in understanding complex mercury dynamics in the Yolo Bypass and the Delta, which is clearly documented in the reports subject to review. The Review Panel also emphasizes that because upstream inputs are the overwhelmingly dominant sources of mercury and methylmercury, reduction of those sources is the only way to significantly reduce downstream mercury and methylmercury levels. While load reductions in the Delta are possible, the Review Panel found that it is unlikely that methylmercury TMDL targets for the agricultural areas of the Yolo Bypass can be met. The Review Panel cautions against using the models as a predictive tool without further refinement due to challenges in model validation, input data, and boundary conditions. The Review Panel encourages the incorporation of 1) a biological modeling component to address methylmercury bioaccumulation and biomagnification and 2) down-scaled climate models to account for the profound changes that are expected to occur in the region.

The independent science review panel consisted of Dr. Brian Branfireun (Lead Author), Dr. Cindy Gilmour, Dr. Robert Mason, Dr. Carl Mitchell (Chair), and Dr. Curtis Pollman. These panel members were selected for their expertise and reputation in the fields of biogeochemical mercury cycling, wetland ecology, and modeling.

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The Delta Science Program is pleased to assist in the process for evaluating these documents through transparent independent scientific peer review. If there are questions about this Delta Mercury Control Program Phase 1 review report or the overall process, please contact Dylan Stern, Program Manager (916) 879-8298 or at dylan.stern@deltacouncil.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Laurel E. Larsen".

Laurel Larsen, Ph.D.
Lead Scientist, Delta Science Program
Delta Stewardship Council

Enclosure

Cc: Adam Laputz, Assistant Executive Officer (adam.laputz@waterboards.ca.gov), Lauren Smitherman, Senior Environmental Scientist, Supervisor (Lauren.Smitherman@waterboards.ca.gov), Henry DeBey, Environmental Program Manager (Henry.DeBey@deltacouncil.ca.gov), Dylan Stern, Program Manager I (Dylan.Stern@deltacouncil.ca.gov)